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Appl. No. 10/655,579; Filed: Sep 5, 2003

Dkt No. 0942.5580002/RWE/BJD/JKM; Group Unit: 1634

Inventors: PARK, et al Tel: 202-371-2600

Title: Compositions and Methods for Synthesizing Nucleic Acids



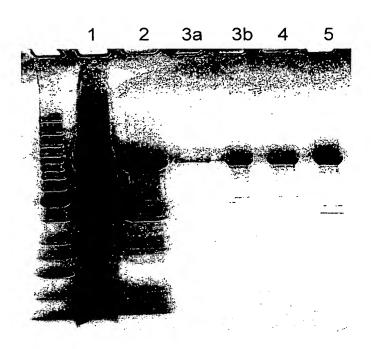


FIG.1

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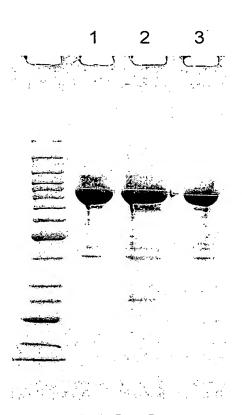


FIG.2

relaxed circular super-coiled

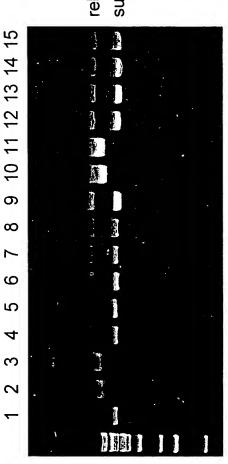


FIG. 3

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|            | Lot    | #3     |         |            | Lot    | #4     |         |
|------------|--------|--------|---------|------------|--------|--------|---------|
| Free Oligo | 2 min. | 5 min. | 30 min. | Free Oligo | 2 min. | 5 min. | 30 min. |

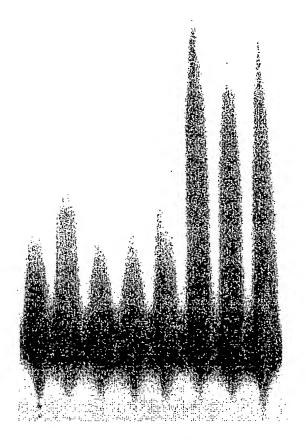


FIG.4

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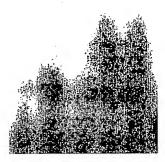
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0 10 20 30 40 AccuPrime protein (ng)



Super-shift

Shift

Free oligonucleotide

FIG.5

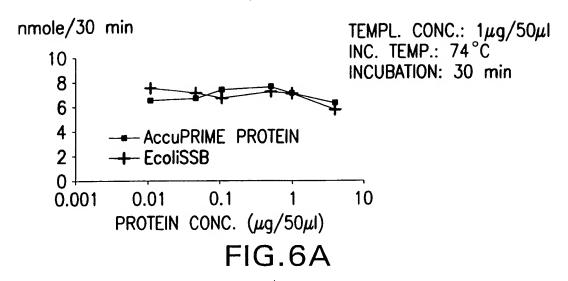
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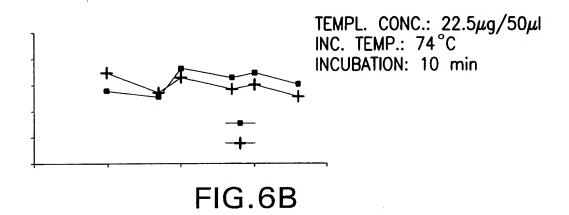
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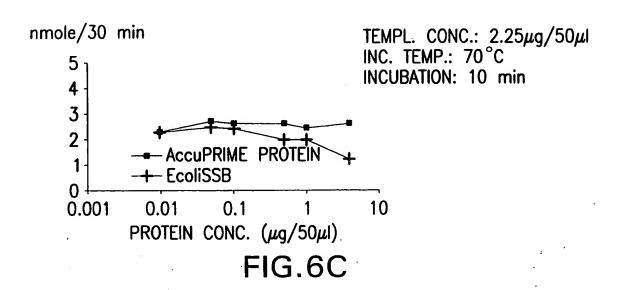
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Inventors: PARK, et al Tel: 202-371-2600

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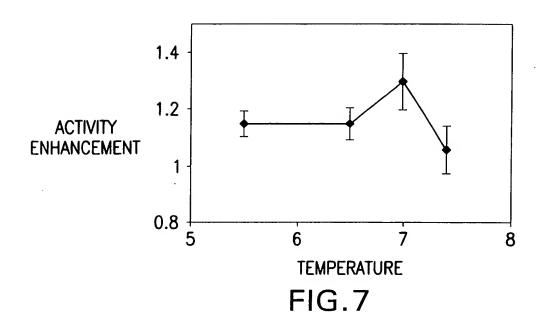
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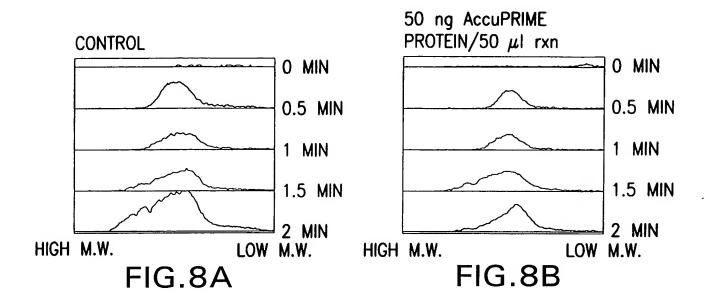
Appl. No. 10/655,579; Filed: Sep 5, 2003

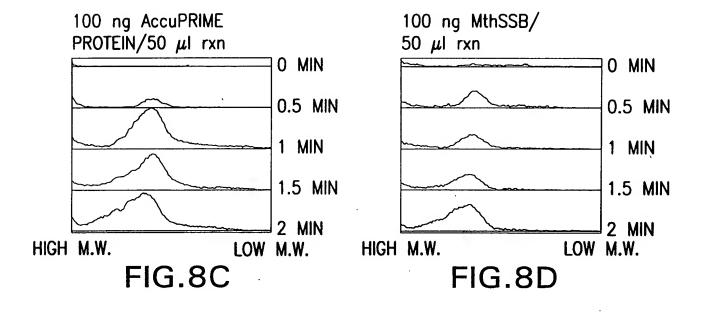
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|                        |       |        | ž |  |
|------------------------|-------|--------|---|--|
| 10x APTaq Reaction Mix | 42°C  | ays    | - |  |
|                        |       | 4 Days | + |  |
|                        |       | 2 Days |   |  |
|                        |       |        | + |  |
|                        | -20°C |        | 1 |  |
|                        |       | 4      | + | 100-<br>100-<br>100-100-100-100-100-100-100-10 |
| 2x APTaq SuperMix      | 42°C  | 4 Days | ı |  |
|                        |       |        | + |  |
|                        |       | 2 Days | 1 |  |
|                        |       |        | + |  |
|                        | -20°C |        | ı |  |
|                        | -2(   |        | + |  |
| PtTaq                  |       |        |   |  |
|                        |       |        |   |  |

FIG 9

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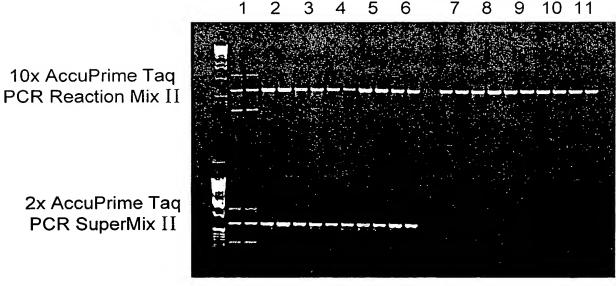
1 2 3 4 5 6 7 8 9 10 11

10x AccuPrime Taq
PCR Reaction Mix I

2x AccuPrime Taq
PCR SuperMix I

12 13 14 15 16 17

FIG.10A



12 13 14 15 16 17

FIG.10B

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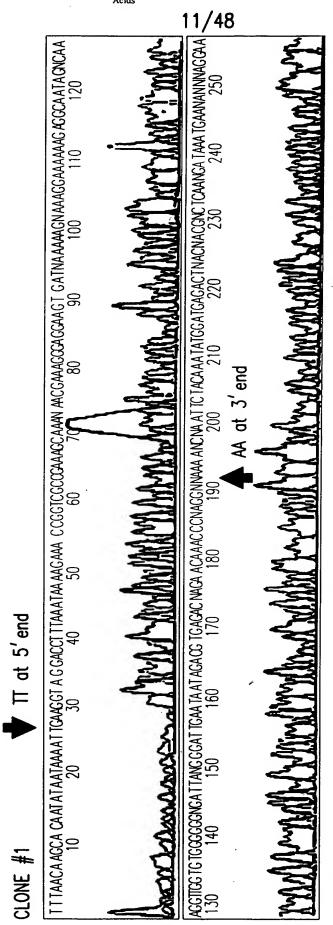


FIG.11A

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Title: Compositions and Methods for Synthesizing Nucleic

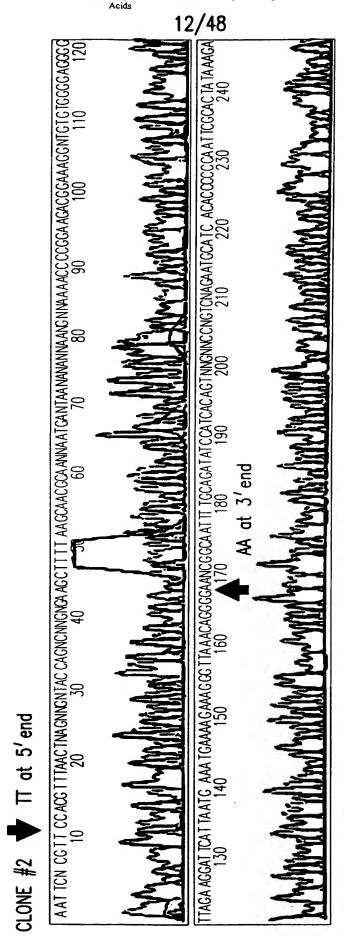


FIG. 11B

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Amount of template DNA in PCR Carry-over volumes from PCR p53 220bp 50ng 200ng AccuPrime Pvu II Platinum Taq 200ng 50ng S 200ng AccuPrime 50ng 2 50ng 200ng 5 10 Platinum Taq 9 2

7.0

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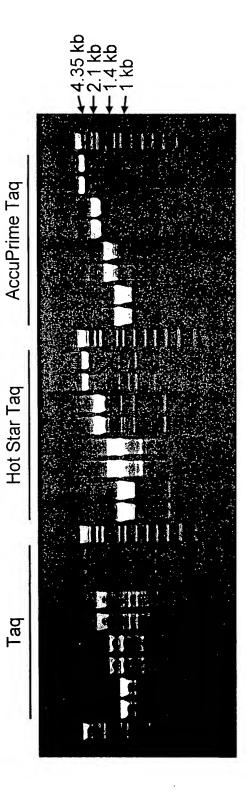


FIG.13

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### **Short Amplicons**

Hot Star Taq

AccuPrime Taq

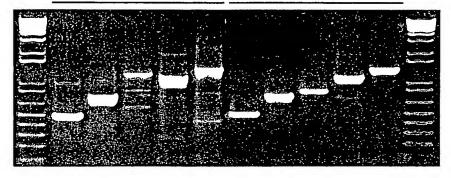


FIG.14A

Long Amplicons

Hot Star AccuPrime

Taq

Taq

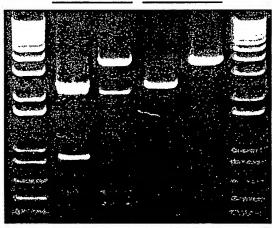


FIG.14B

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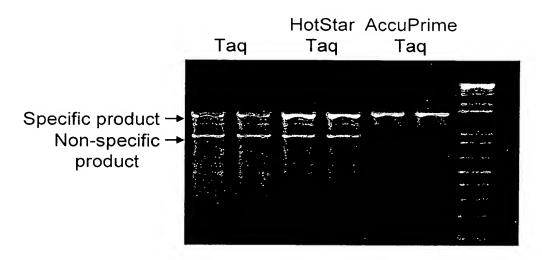


FIG.15A

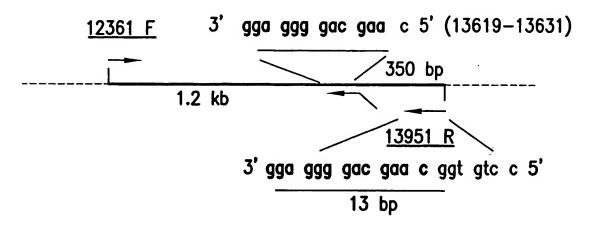


FIG.15B

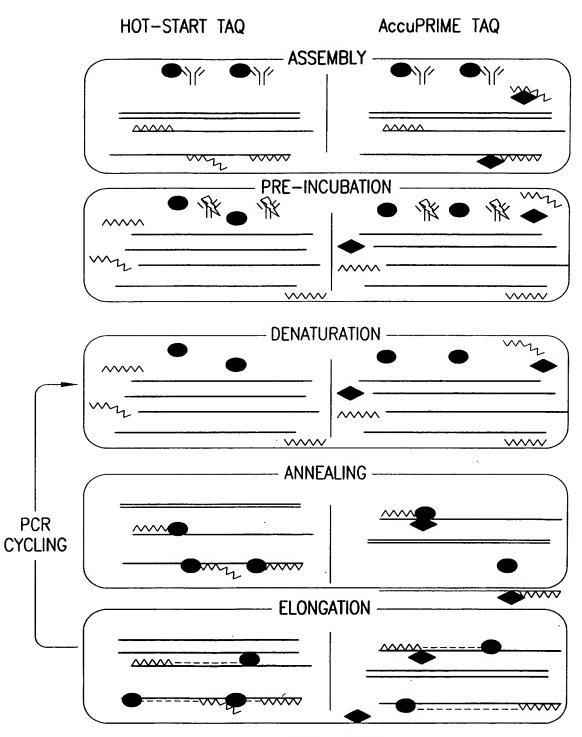


FIG. 16

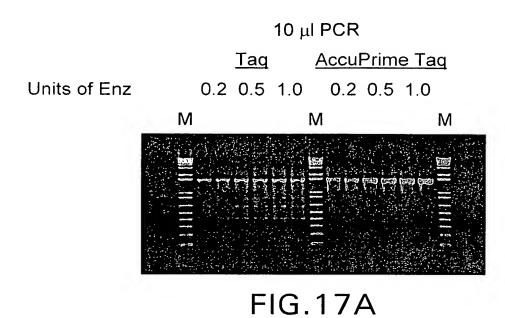
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25 μl PCR

Taq AccuPrime Taq

Units of Enz 0.5 1.0 2.0 0.5 1.0 2.0

M M M

M

FIG.17B

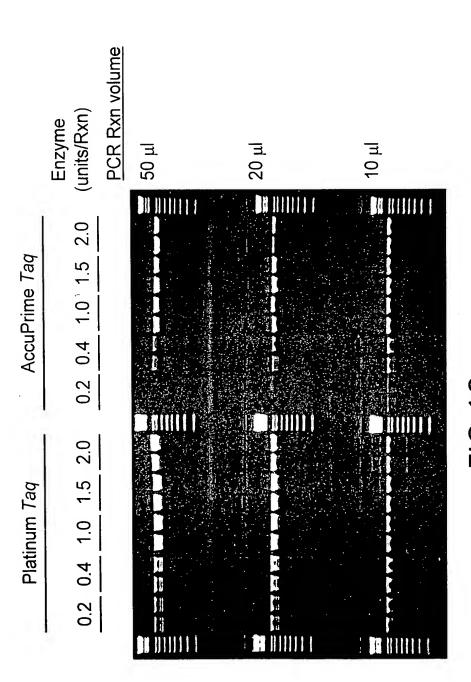
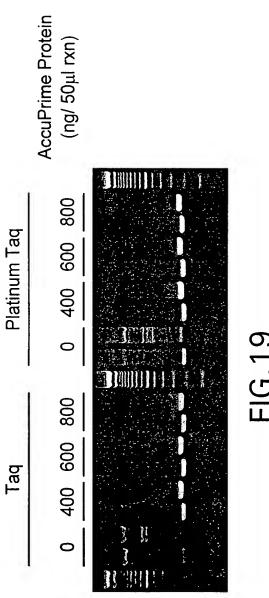


FIG.18



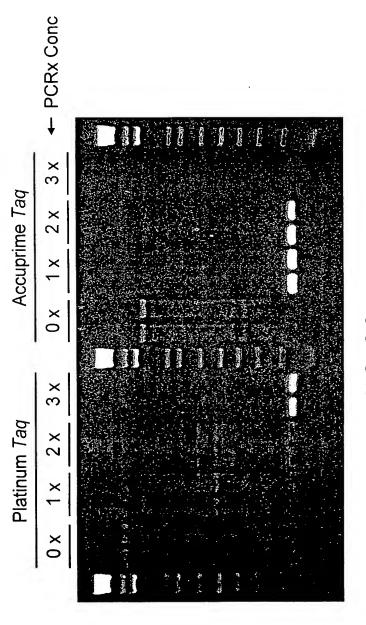


FIG.20

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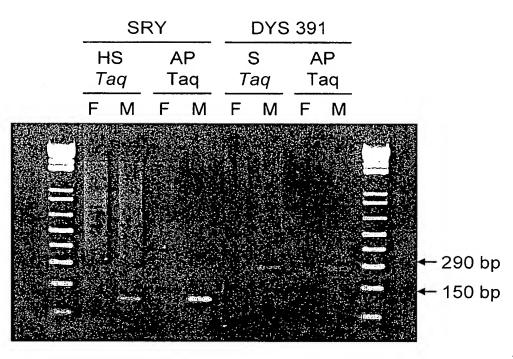


FIG.21

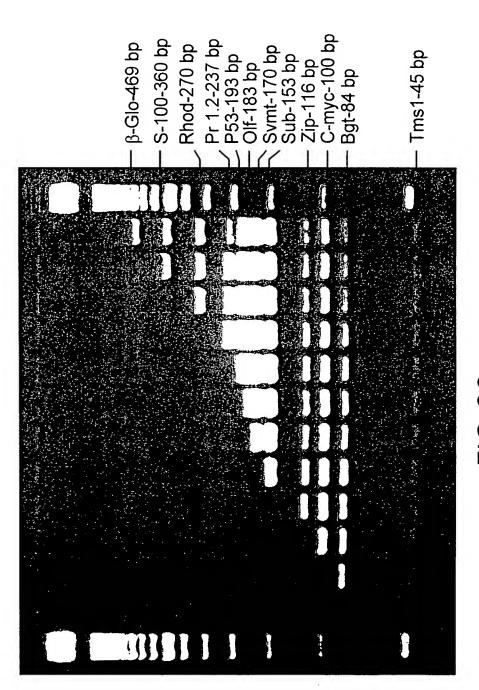


FIG.22

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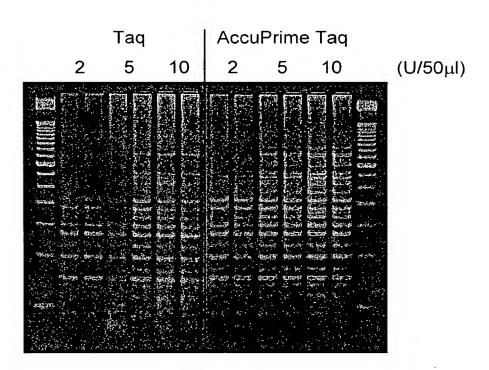


FIG.23

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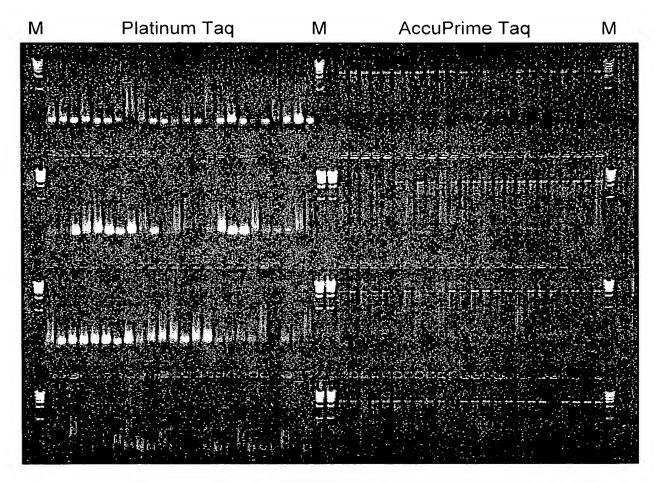


FIG.24

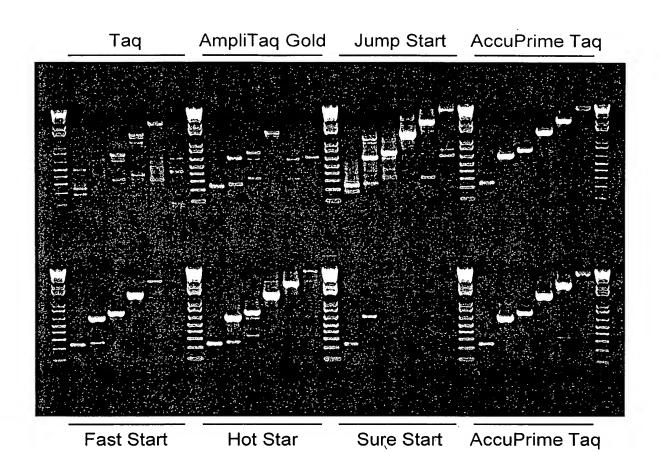


FIG.25

60°C annealing 62°C annealing AmpliTaq AccuPrime AmpliTaq **AccuPrime** Gold Taq Gold Taq AmpliTaq AccuPrime AmpliTaq **AccuPrime** Gold Taq Gold Taq 64°C annealing 66°C annealing

FIG.26

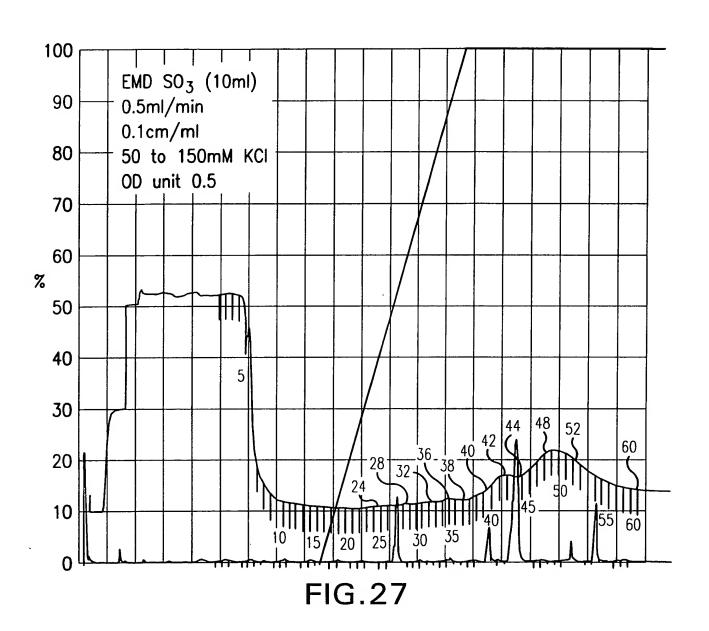
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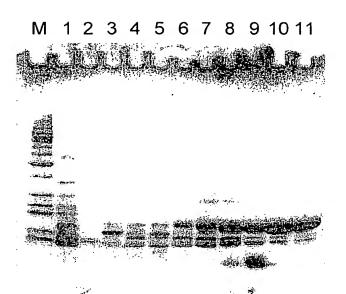


FIG.28

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## M 1 2 3 4 5 M

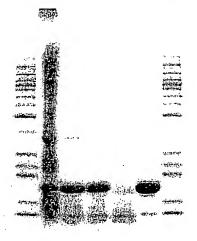


FIG.29

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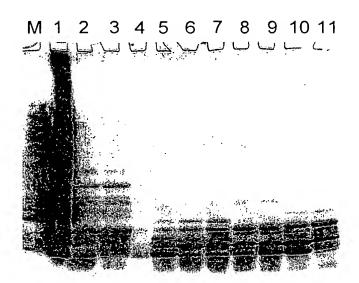


FIG.30A





FIG.30B

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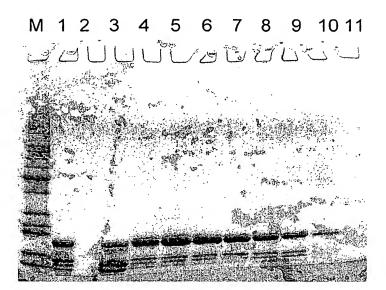


FIG.31

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FIG.32C

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Acids

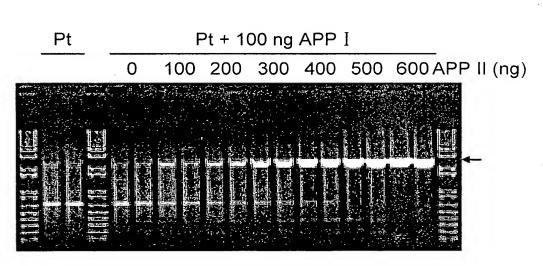


FIG.33

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Title: Compositions and Methods for Synthesizing Nucleic Acids

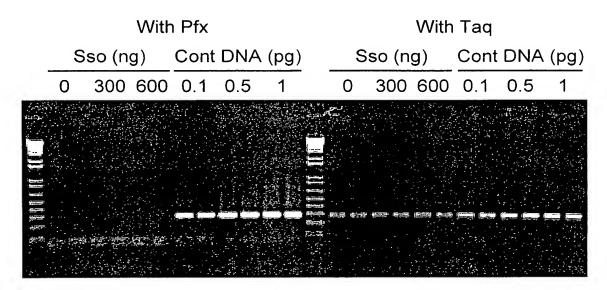
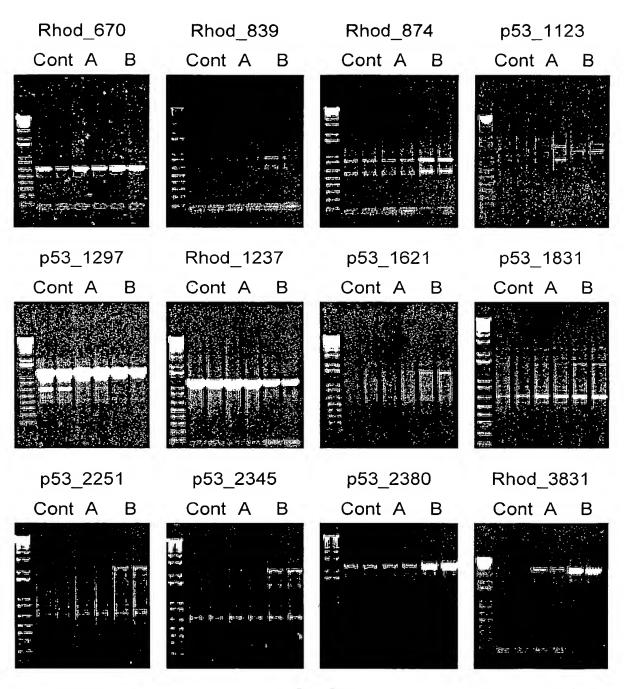
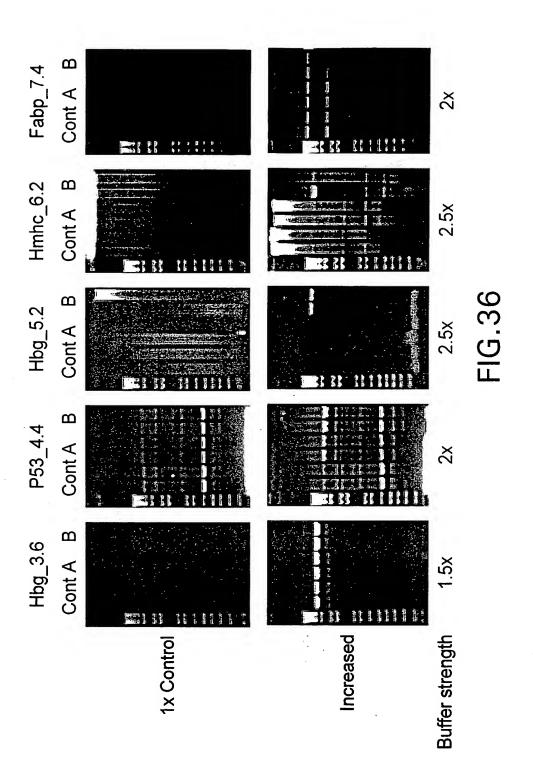


FIG.34



**FIG.35** 



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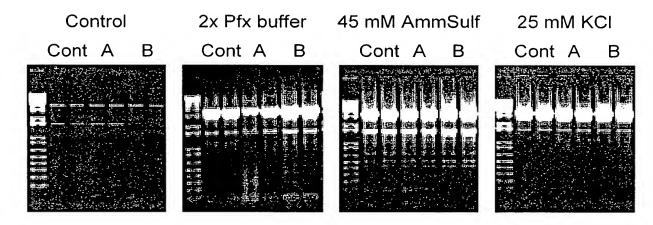


FIG.37

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KOD hot-start AccuPrime Pfx S 4 ന 2 2 4 ന  $\alpha$ 2 4 Tgo က 2 S Pfu Ultra 4 ന 2 S Pfu Turbo 4 က  $\alpha$ 1

FIG.38

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μg per 50 μl rxn 0.1 0.2 0.4 0.1 0.2 0.4 0.1 0.2 0.4 SsoSSB MjaSSB | MthSSB 0 0 0 

FIG.39

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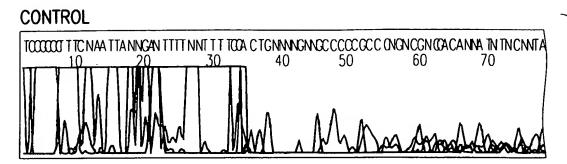
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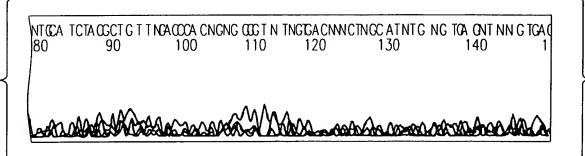
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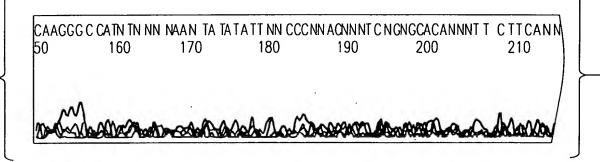
1959bp 1543bp 1243bp MjaSSB + SsoSSB 150ng 150ng Φ σ ပ Ω α SsoSSB 300ng Φ  $\boldsymbol{\sigma}$ ပ ရ ത MthSSB 300ng Φ  $\boldsymbol{\sigma}$ ပ ٩ ത Φ MjaSSB 300ng O ပ Ω α 

FIG.40

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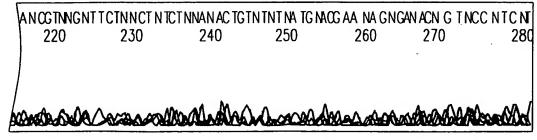


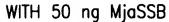
FIG.41A

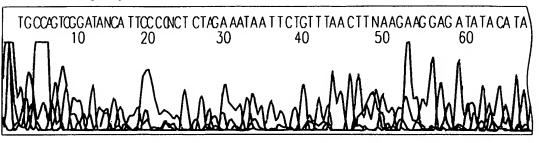
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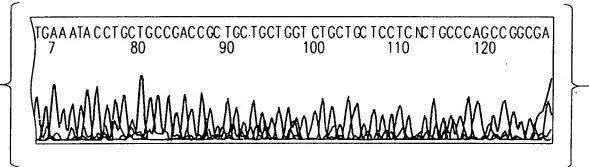
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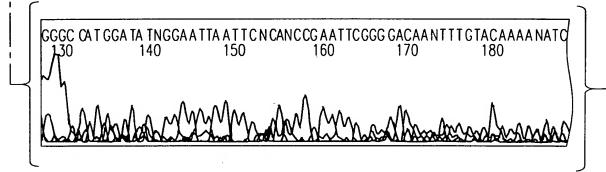
Dkt No. 0942.5580002/RWE/BJD/JKM; Group Unit: 1634
Inventors: PARK, et al Tel: 202-371-2600

Title: Compositions and Methods for Synthesizing Nucleic Acids









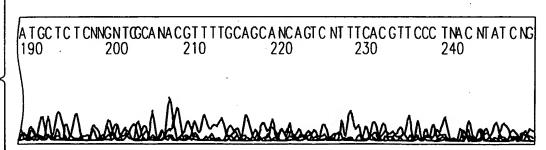


FIG.41B

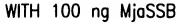
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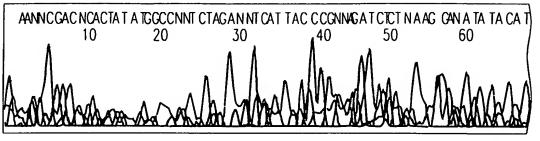
Appl. No. 10/655,579; Filed: Sep 5, 2003

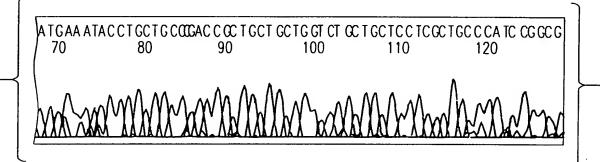
Dkt No. 0942.5580002/RWE/BJD/JKM; Group Unit: 1634

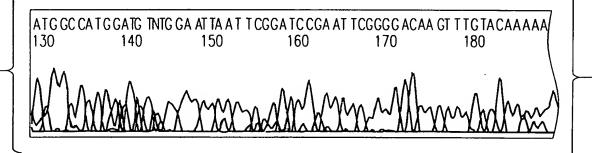
Inventors: PARK, et al Tel: 202-371-2600

Title: Compositions and Methods for Synthesizing Nucleic









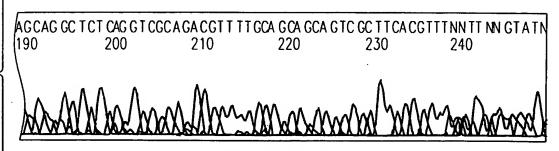


FIG.41C

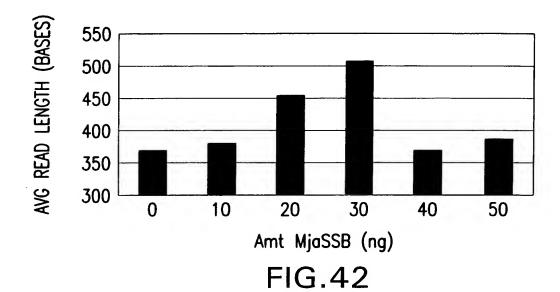
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Inventors: PARK, et al Tel: 202-371-2600

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Acids

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## 1 2 3 4 5 6 7 8 9 10 11 12 13

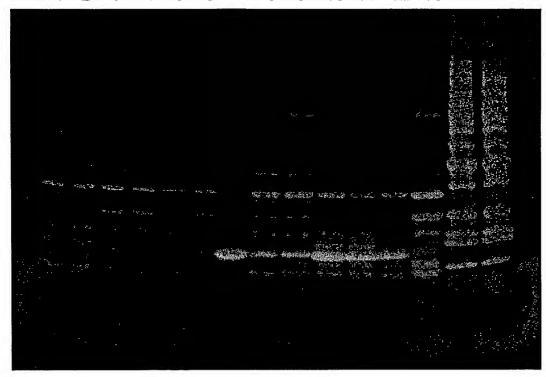


FIG.43

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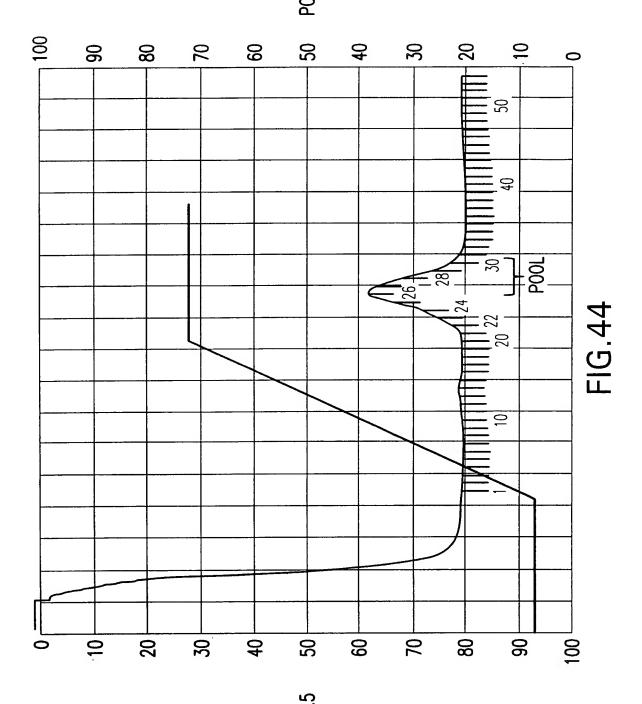
Dkt No. 0942.5580002/RWE/BJD/JKM; Group Unit: 1634

Inventors: PARK, et al Tel: 202-371-2600

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L FT 22 23 24 25 26 27 28 29 30 FIG.45A

